

**REDACTED – FOR PUBLIC INSPECTION**

October 28, 2013

**VIA HAND DELIVERY AND ECFS**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: *WC Docket No. 10-90*  
*PTI Pacifica Inc. dba IT&E Form 481 Submission, SAC 669004*  
*Request for Confidential Treatment*

Dear Ms. Dortch:

On behalf of PTI Pacifica Inc. dba IT&E (“IT&E”), please find (1) IT&E’s Form 481 submission for SAC 669004 (Guam), which was timely filed with USAC on October 15, 2013 and (2) a request that this material be withheld from public inspection pursuant to sections 0.457 and 0.459 of the Commission’s rules. 47 C.F.R. §§ 0.457, 0.459. IT&E is filing concurrently a version of this submission redacted for public inspection through the Commission’s Electronic Comment Filing System. Per FCC Public Notice DA 13-2025, this filing is timely.

The submission contains commercial and technical data that IT&E does not in the normal course of its business reveal to the public or its competitors. IT&E thus requests that the submission be withheld from public inspection under Freedom of Information Act (“FOIA”) Exemption 4, 5 U.S.C. §552(b)(4), and Section 0.457(d)(2) of the Commission’s Rules.

In support of this request, IT&E provides the following information, as required by Sections 0.457(d)(2) and 0.459(b) of the Commission’s Rules.

1. Information for Which Confidentiality is Requested. IT&E is requesting confidential treatment for the non-redacted portions of the Form 481 submission, which contain commercially-sensitive, proprietary, and confidential operational, cost and technical information about IT&E’s past and anticipated investments in the very competitive wireless market in Guam.

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2. Circumstances Giving Rise to Submission of Materials. IT&E is submitting Form 481 and attachments to comply with newly adopted FCC rules.
3. Degree to Which Information is Commercial or Financial, or Contains a Trade Secret or is Privileged. The attached document contains commercially-sensitive, proprietary, and confidential operational, financial and technical information about IT&E's wireless infrastructure and plans in Guam. IT&E closely guards this information against disclosure to competitors and the public. The information for which confidential treatment is sought concerns IT&E's private business and operations and "would customarily be guarded from competitors." *See* 47 C.F.R. §§ 0.459(a)(4), 0.457(d)(2). Such proprietary and confidential information may be withheld from public disclosure under FOIA Exemption 4.
4. Degree to Which Information Concerns a Service That is Subject to Competition. The submission contains commercially-sensitive, proprietary, and confidential operational and financial information about IT&E's past investments and future infrastructure plans in the Guam CMRS market, which is highly competitive.
5. Substantial Competitive Harm That Would Result from Disclosure of Information. Public disclosure of the commercially-sensitive, proprietary, and confidential operational and financial information set forth in the Plan would cause competitive harm to IT&E. The wireless industry in Guam is highly competitive, and thus others always are interested in gaining a competitive advantage by learning information about IT&E's infrastructure plans and construction schedules. The D.C. Circuit has found that parties do not have to "show actual competitive harm" to justify confidential treatment. Rather, "[a]ctual competition and the likelihood of substantial competitive injury" is sufficient to bring commercial information within the realm of confidentiality." *Public Citizen Health Research Group*, 704 F.2d at 1291, *quoting Gulf & Western Industries v. U.S.*, 615 F.2d 527, 530 (D.C. Cir. 1979).
6. Measures Taken to Prevent Unauthorized Disclosure. IT&E treats the operational and financial information set forth in the submission as confidential and proprietary and does not publicly disclose this information.
7. Previous Disclosure. There has been no public disclosure of the information that IT&E has redacted in its public filing.
8. Requested Duration of Nondisclosure. The attached Request should not be released for public inspection until such information no longer is deemed confidential and proprietary by IT&E and no longer subject to IT&E's internal procedures for maintaining its confidentiality. The attached Request contains commercially-sensitive, proprietary and confidential operational and technical information, the release of which would adversely affect IT&E's competitive position.

For the foregoing reasons, IT&E respectfully requests that the Commission withhold from public inspection the attached document. Consistent with 47 C.F.R. § 0.459(d)(1), IT&E requests notification if access to the attachment is requested pursuant to the FOIA or otherwise,

October 28, 2013

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**REDACTED – FOR PUBLIC INSPECTION**

so that IT&E may have an opportunity to oppose the grant of any such request. As noted previously, a redacted version of the document is being filed with ECFS.

If you have any questions, please contact the undersigned.

Respectfully submitted,

/s/ Timothy J. Cooney  
Timothy J. Cooney

**REDACTED - FOR PUBLIC INSPECTION**

|   |   |
|---|---|
| <b>FCC Form 481 - Carrier Annual Reporting</b><br><b>Data Collection Form</b> | <small>FCC Form 481</small><br><small>OMB 3060-0986</small><br><small>OMB 3060-0819</small><br><small>Avg. Burden Estimate per Respondent: 20 Hours</small> |
|---|---|

|   |                             |
|---|-----------------------------|
| <b>&lt;010&gt;</b> Study Area Code  | 669004                      |
| <b>&lt;015&gt;</b> Study Area Name  | PTI Pacifica, Inc. dba IT&E |
| <b>&lt;020&gt;</b> Program Year   | 2014                        |
| <b>&lt;030&gt;</b> Contact Name: Person USAC should contact with questions about this data      | Leriza Debrum               |
| <b>&lt;035&gt;</b> Contact Telephone Number: Number of the person identified in data line <030> | (670) 682-2612              |
| <b>&lt;039&gt;</b> Contact Email: Email of the person identified in data line <030>             | leriza.debrum@itehq.net     |

| <b>ANNUAL REPORTING FOR ALL CARRIERS</b>  |  |                                      | <b>54.313<br/>Completion<br/>Required</b> | <b>54.422<br/>Completion<br/>Required</b> |
|---|--|--------------------------------------|---|---|
|   |  |                                      | <i>(check box when complete)</i>          |   |
| <b>&lt;100&gt;</b> Service Quality Improvement Reporting                            | <i>(complete attached worksheet)</i>             |                                      | X   |   |
| <b>&lt;200&gt;</b> Outage Reporting (voice)   | <i>(complete attached worksheet)</i>             |                                      | X   | X   |
| <b>&lt;210&gt;</b> <input type="checkbox"/> <-- check box if no outages to report   |  |                                      |   |   |
| <b>&lt;300&gt;</b> Unfulfilled Service Requests (voice)                             | 0  |                                      | X   |   |
| <b>&lt;310&gt;</b> Detail on Attempts (voice)                                       |  | <i>(attach descriptive document)</i> |   |   |
| <b>&lt;320&gt;</b> Unfulfilled Service Requests (broadband)                         |  |                                      |   |   |
| <b>&lt;330&gt;</b> Detail on Attempts (broadband)                                   |  | <i>(attach descriptive document)</i> |   |   |
| <b>&lt;400&gt;</b> Number of Complaints per 1,000 customers (voice)                 |  |                                      | X   | X   |
| <b>&lt;410&gt;</b> Fixed  |  |                                      |   |   |
| <b>&lt;420&gt;</b> Mobile   | 0  |                                      |   |   |
| <b>&lt;430&gt;</b> Number of Complaints per 1,000 customers (broadband)             |  |                                      | X   |   |
| <b>&lt;440&gt;</b> Fixed  |  |                                      |   |   |
| <b>&lt;450&gt;</b> Mobile   | 0  |                                      |   |   |
| <b>&lt;500&gt;</b> Service Quality Standards & Consumer Protection Rules Compliance | <i>(check to indicate certification)</i>         |                                      | X   | X   |
| <b>&lt;510&gt;</b>  | <i>(attach descriptive document)</i>             |                                      | X   | X   |
| <b>&lt;600&gt;</b> Functionality in Emergency Situations                            | <i>(check to indicate certification)</i>         |                                      | X   | X   |
| <b>&lt;610&gt;</b>  | <i>(attach descriptive document)</i>             |                                      | X   | X   |
| <b>&lt;700&gt;</b> Company Price Offerings (voice)                                  | <i>(complete attached worksheet)</i>             |                                      |   |   |
| <b>&lt;710&gt;</b> Company Price Offerings (broadband)                              | <i>(complete attached worksheet)</i>             |                                      |   |   |
| <b>&lt;800&gt;</b> Operating Companies and Affiliates                               | <i>(complete attached worksheet)</i>             |                                      | X   | X   |
| <b>&lt;900&gt;</b> Tribal Land Offerings (Y/N)?                                     | <i>(if yes, complete attached worksheet)</i>     |                                      |   |   |
| <b>&lt;1000&gt;</b> Voice Services Rate Comparability                               | <i>(check to indicate certification)</i>         |                                      |   |   |
| <b>&lt;1010&gt;</b>   | <i>(attach descriptive document)</i>             |                                      |   |   |
| <b>&lt;1100&gt;</b> Terrestrial Backhaul (Y/N)?                                     | <i>(if not, check to indicate certification)</i> |                                      |   |   |
| <b>&lt;1110&gt;</b>   | <i>(complete attached worksheet)</i>             |                                      |   |   |
| <b>&lt;1200&gt;</b> Terms and Condition for Lifeline Customers                      | <i>(complete attached worksheet)</i>             |                                      |   | X   |

**Price Cap Carriers, Proceed to Price Cap Additional Documentation Worksheet**

*Including Rate-of-Return Carriers affiliated with Price Cap Local Exchange Carriers*

|                     |  |   |  |
|---------------------|--|---|--|
| <b>&lt;2000&gt;</b> | <i>(check to indicate certification)</i> | X |  |
| <b>&lt;2005&gt;</b> | <i>(complete attached worksheet)</i>     | X |  |

**Rate of Return Carriers, Proceed to ROR Additional Documentation Worksheet**

|                     |  |  |  |
|---------------------|--|--|--|
| <b>&lt;3000&gt;</b> | <i>(check to indicate certification)</i> |  |  |
| <b>&lt;3005&gt;</b> | <i>(complete attached worksheet)</i>     |  |  |

**(100) Service Quality Improvement Reporting  
Data Collection Form**

FCC Form 481  
OMB Control No. 3060-0986  
OMB Control No. 3060-0819  
July 2013

|       |   |                               |
|-------|---|-------------------------------|
| <010> | Study Area Code   | 669004                        |
| <015> | Study Area Name   | PTI Pacifica, Inc. dba IT&E   |
| <020> | Program Year  | 2014                          |
| <030> | Contact Name - Person USAC should contact regarding this data   | Leriza Debrum                 |
| <035> | Contact Telephone Number - Number of person identified in data line <030>   | (670) 682-2612                |
| <039> | Contact Email Address - Email Address of person identified in data line <030>   | leriza.debrum@itehq.net       |
| <110> | Has your company received its ETC certification from the FCC?<br>If your answer to Line <110> is yes, do you have an existing §54.202(a) "5<br>year plan" filed with the FCC? | (yes / no ) No<br>(yes / no ) |

If your answer to Line <111> is yes, then you are required to file a progress report, on line <112> delineating the status of your company's existing § 54.202(a) "5 year plan" on file with the FCC, as it relates to your provision of voice telephony service.

<112> Attach Five-Year Service Quality Improvement Plan or, in subsequent years, your annual progress report filed pursuant to 47 C.F.R. § 54.313(a)(1). If your company is a CETC which receives only frozen support, your progress report is only required to address voice telephony service

Please check these boxes below to confirm that the attached PDF, on line 112, contains a progress report on its five-year service quality improvement plan pursuant to § 54.202(a). The information shall be submitted at the wire center level or census block as appropriate.

|       |   |   |
|-------|---|---|
| <113> | Maps detailing progress towards meeting plan targets                                      | X |
| <114> | Report how much universal service (USF) support was received                              | X |
| <115> | How (USF) was used to improve service quality   | X |
| <116> | How (USF) was used to improve service coverage  | X |
| <117> | How (USF) was used to improve service capacity  | X |
| <118> | Provide an explanation of network improvement targets not met in the prior calendar year. | X |

669004gu100.pdf  
Name of Attached Document (.pdf)

[illegible]

FCC Form 481  
OMB Control No. 3060-0986  
OMB Control No. 3060-0819  
July 2013

[illegible]

|  |  |                           |
|--|--|---------------------------|
| <b>(1200) Terms and Condition for Lifeline Customers</b> |  | FCC Form 481              |
| <b>Lifeline</b>  |  | OMB Control No. 3060-0986 |
| <b>Data Collection Form</b>                              |  | OMB Control No. 3060-0819 |
|  |  | July 2013                 |

|       |   |                             |
|-------|---|-----------------------------|
| <010> | Study Area Code   | 669004                      |
| <015> | Study Area Name   | PTI Pacifica, Inc. dba IT&E |
| <020> | Program Year  | 2014                        |
| <030> | Contact Name - Person USAC should contact regarding this data                 | Leriza Debrum               |
| <035> | Contact Telephone Number - Number of person identified in data line <030>     | (670) 682-2612              |
| <039> | Contact Email Address - Email Address of person identified in data line <030> | leriza.debrum@itechq.net    |

|        |  |                                  |
|--------|--|----------------------------------|
| <1210> | Terms & Conditions of Voice Telephony Lifeline Plans | 669004gu1200.pdf                 |
|        |  | Name of attached document (.pdf) |
| <1220> | Link to Public Website                               | HTTP                             |

Please check these boxes below to confirm that the attached PDF, on line 1210, or the website listed, on line 1220, contains the required information pursuant to § 54.422(a)(2) annual reporting for ETCs receiving low-income support, carriers must annually report:

|        |   |                                     |
|--------|---|-------------------------------------|
| <1221> | Information describing the terms and conditions of any voice telephony service plans offered to Lifeline subscribers, | <input checked="" type="checkbox"/> |
| <1222> | Details on the number of minutes provided as part of the plan,  | <input checked="" type="checkbox"/> |
| <1223> | Additional charges for toll calls, and rates for each such plan.  | <input checked="" type="checkbox"/> |



**(2005) Price Cap Carrier Additional Documentation****Data Collection Form***Including Rate-of-Return Carriers affiliated with Price Cap Local Exchange Carriers*

FCC Form 481  
 OMB Control No. 3060-0986  
 OMB Control No. 3060-0819  
 July 2013

|       |   |                             |
|-------|---|-----------------------------|
| <010> | Study Area Code   | 669004                      |
| <015> | Study Area Name   | PTI Pacifica, Inc. dba IT&E |
| <020> | Program Year  | 2014                        |
| <030> | Contact Name - Person USAC should contact regarding this data                 | Leriza Debrum               |
| <035> | Contact Telephone Number - Number of person identified in data line <030>     | (670) 682-2612              |
| <039> | Contact Email Address - Email Address of person identified in data line <030> | leriza.debrum@itehq.net     |

**CHECK the boxes below to note compliance as a recipient of Incremental Connect America Phase I support, frozen High Cost support, High Cost support to offset access charge reductions, and Connect America Phase II support as set forth in 47 CFR § 54.313(b),(c),(d),(e) the information reported on this form and in the documents attached below is accurate.**

**Incremental Connect America Phase I reporting**

|        |  |                          |
|--------|--|--------------------------|
| <2010> | 2nd Year Certification {47 CFR § 54.313(b)(1)} | <input type="checkbox"/> |
| <2011> | 3rd Year Certification {47 CFR § 54.313(b)(2)} | <input type="checkbox"/> |

**Price Cap Carrier Receiving Frozen Support Certification {47 CFR § 54.312(a)}**

|        |  |                                     |
|--------|--|-------------------------------------|
| <2012> | 2013 Frozen Support Certification            | <input checked="" type="checkbox"/> |
| <2013> | 2014 Frozen Support Certification            | <input type="checkbox"/>            |
| <2014> | 2015 Frozen Support Certification            | <input type="checkbox"/>            |
| <2015> | 2016 and future Frozen Support Certification | <input type="checkbox"/>            |

**Price Cap Carrier Connect America ICC Support {47 CFR § 54.313(d)}**

|        |   |                          |
|--------|---|--------------------------|
| <2016> | Certification Support Used to Build Broadband | <input type="checkbox"/> |
|--------|---|--------------------------|

**Connect America Phase II Reporting {47 CFR § 54.313(e)}**

|        |  |                          |
|--------|--|--------------------------|
| <2017> | 3rd year Broadband Service Certification | <input type="checkbox"/> |
| <2018> | 5th year Broadband Service Certification | <input type="checkbox"/> |
| <2019> | Interim Progress Certification           | <input type="checkbox"/> |
| <2020> |  | <input type="checkbox"/> |


Please check the box to confirm that the attached PDF, on line 2021, contains the required information pursuant to § 54.313 (e)(3)(iii), as a recipient of CAF Phase II support shall provide the number, names, and addresses of community anchor institutions to which began providing access to broadband service in the preceding calendar year.

|        |  |  |
|--------|--|--|
| <2021> | Interim Progress Community Anchor Institutions | Name of Attached Document Listing Required Information |
|--------|--|--|

|   |                           |
|---|---------------------------|
| <b>Certification - Reporting Carrier</b><br><b>Data Collection Form</b> | FCC Form 481              |
|   | OMB Control No. 3060-0986 |
|   | OMB Control No. 3060-0819 |
|   | July 2013                 |

|       |   |                             |
|-------|---|-----------------------------|
| <010> | Study Area Code   | 669004                      |
| <015> | Study Area Name   | PTI Pacifica, Inc. dba IT&E |
| <020> | Program Year  | 2014                        |
| <030> | Contact Name - Person USAC should contact regarding this data                 | Leriza Debrum               |
| <035> | Contact Telephone Number - Number of person identified in data line <030>     | (670) 682-2612              |
| <039> | Contact Email Address - Email Address of person identified in data line <030> | leriza.debrum@itehq.net     |

TO BE COMPLETED BY THE REPORTING CARRIER, IF THE REPORTING CARRIER IS FILING ANNUAL REPORTING ON ITS OWN BEHALF:

|  |                                       |                   |
|--|---------------------------------------|-------------------|
| <p>I certify that I am an officer of the reporting carrier; my responsibilities include ensuring the accuracy of the annual reporting requirements for universal service support recipients; and, to the best of my knowledge, the information reported on this form and in any attachments is accurate.</p> |                                       |                   |
| <p>Name of Reporting Carrier: PTI Pacifica, Inc. dba IT&amp;E</p>  |                                       |                   |
| <p>Signature of Authorized Officer: </p>  | <p>Date 10/15/13</p>                  |                   |
| <p>Printed name of Authorized Officer: Steven Carrara</p>  |                                       |                   |
| <p>Title or position of Authorized Officer: General Counsel</p>  |                                       |                   |
| <p>Telephone number of Authorized Officer: (671) 922-4454</p>  |                                       |                   |
| <p>Study Area Code of Reporting Carrier: 669004</p>  | <p>Filing Due Date for this form:</p> | <p>10/15/2013</p> |
| <p>Persons willfully making false statements on this form can be punished by fine or forfeiture under the Communications Act of 1934, 47 U.S.C. §§ 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. § 1001.</p>  |                                       |                   |

### **IT&E's Lifeline Assistance Program:**

The Lifeline Assistance Program gives qualified low-income subscribers a discount on their phone service from the Universal Service Fund. Residential subscribers receiving the following assistance may qualify.

Federal Public Housing Assistance or Section 8

Food Stamps

Medicaid

Low Income Home Energy Assistance Program (LIHEAP)

National School Lunch (NSL) FREE Program

Temporary Assistance to Needy Families (TANF)

Total household income at or below 135% of the Federal Poverty Guidelines(FPG)

The program allows eligible participant to sign-up for:

Basic Lifeline Plan for \$ 7.99 per month

Plan Includes:

100 Free minutes (.35/per additional minute)

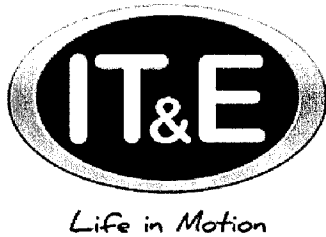
Unlimited Local SMS

Free Custom Calling Features

The standard \$25 deposit is waived if the customer agrees to block long-distance. Toll blocking is free of charge.

**Limitations:** If a participant wishes to have long-distance, then the \$25 deposit charge is applicable and due upon sign-up. Annual Certification is required to continue eligibility of the Lifeline Assistance Program. Only one Lifeline discount per household.

Call 922-4432 for more details or drop by IT&E's Customer Service Center at Harmon during regular business hours.



October 15, 2013

Marlene H. Dortch  
Office of the Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

USAC  
Vice President, High Cost and Low Income Division  
2000 L Street NW, Suite 200  
Washington, DC 20036

Re: PTI Pacifica Inc., d/b/a IT&E Certification Pursuant to 47 C.F.R. § 54.313(a) (6) and set forth in 47 C.F.R. § 54.202(a)(2).

Pursuant to the requirements of 47 C.F.R. § 54.313(a)(6) and set forth in 47 C.F.R. § 54.202(a)(2) *PTI Pacifica Inc., d/b/a IT&E* hereby certifies to the Federal Communications Commission and the Universal Service Administrative Company that it is able to function in emergency situations as described in the attached Business Continuity Plan.

I, Steven Carrara, attest for the Study Area Code 669004.

A handwritten signature in black ink, appearing to read "St Carrara", is written over a horizontal line.

Steven Carrara  
General Counsel  
Contact No. (671-777-7252)  
Steven.Carrara@itehq.net

cc: Guam PUC



October 15, 2013

Marlene H. Dortch  
Office of the Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

USAC  
Vice President, High Cost and Low Income Division  
2000 L Street NW, Suite 200  
Washington, DC 20036

Re: PTI Pacifica Inc., d/b/a IT&E Certification Pursuant to 47 C.F.R. § 54.313(a) (6) and set forth in 47 C.F.R. § 54.202(a)(2).

Pursuant to the requirements of 47 C.F.R. § 54.313(a)(6) and set forth in 47 C.F.R. § 54.202(a)(2) *PTI Pacifica Inc., d/b/a IT&E* hereby certifies to the Federal Communications Commission and the Universal Service Administrative Company that it is able to function in emergency situations as described in the attached Business Continuity Plan.

I, Steven Carrara, attest for the Study Area Code 669~~0~~004.

A handwritten signature in black ink, appearing to read 'SE Carrara', is written over a horizontal line.

Steven Carrara  
General Counsel  
Contact No. (671-777-7252)  
Steven.Carrara@itehq.net

cc: CNMI PUC

**NETWORK RESTORATION CONTINGENCY PLAN**

**FOR**

**IT&E GUAM & CNMI WIRELESS NETWORKS**

**CONFIDENTIAL**



*Life in Motion*

## EXECUTIVE SUMMARY

This document describes IT&E's wireless networks with concentration on the prioritization of restoration of failed or damaged sites due to: (1) natural disasters such as typhoons or tsunamis; (2) cases where by coincidence, multiple sites fail at the same time and crews are not available to go to all failed sites simultaneously; and (3) failures of the microwave back haul network. Both the Guam and CNMI networks are considered, both GSM and CDMA, separately by type and then combined by site. Estimated revenue loss for failures are estimated down to the sector level and then rolled up to the BTS, site, and back haul link levels. This level of detail allows judicious decisions to be made to minimize revenue loss, especially in the case where multiple sites fail, insufficient spares are on hand, and lesser used sites must be temporarily cannibalized to restore heavier used sites to service until off-island spare can be obtained.

Also included are the current policy on typhoon preparations for both the Guam and CNMI operations, and an assessment of the risk of damage to IT&E's networks from tsunamis based on recent studies performed by the Pacific Marine Environmental Laboratories following the Sumatran (Indean Ocean) tsunami in 2004 and including information gathered from the Sendai (Pacific Ocean) tsunami of 2011.

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## I INTRODUCTION

The document begins with a description of the various elements in the network and the services they provide. It then describes the current configuration, including where known, short and long terms plans for changes to the network configuration to accommodate new services and shifts in populations densities. It then describes the current geographic distribution of subscribers based on tables and maps generated by the US Census Bureau, matching them to the network elements that serve these populations densities.

Next, a site-by-site assessment of the vulnerabilities of the network elements to typhoon winds presented. This is followed by a site-by-site, service-by-service identification of mitigation techniques that can be applied to reduce the vulnerabilities of the network elements and to speed, where possible, restoration of service in case of loss of service due to damage by high winds and other factors.

The final four sections of this document delineates service-by-service, the priorities that should be assigned to restoration efforts in case of widespread failure or damage to the network by typhoon winds on a site-by-site basis to maximize the number of subscribers to which service is restored while minimizing the time service is down according to

weighted metrics determined by factors such as equipment availability, manpower required, loss of revenue, restoration costs, and other business and humanitarian considerations, etc.

The document can also be used for other purposes, for example, providing guidance in determining what networks elements IT&E should consider for insuring against typhoon damage and determining how to structure loss-of-revenue insurance.

## **II. NETWORK ELEMENTS**

### **III. NETWORK CONFIGURATION**





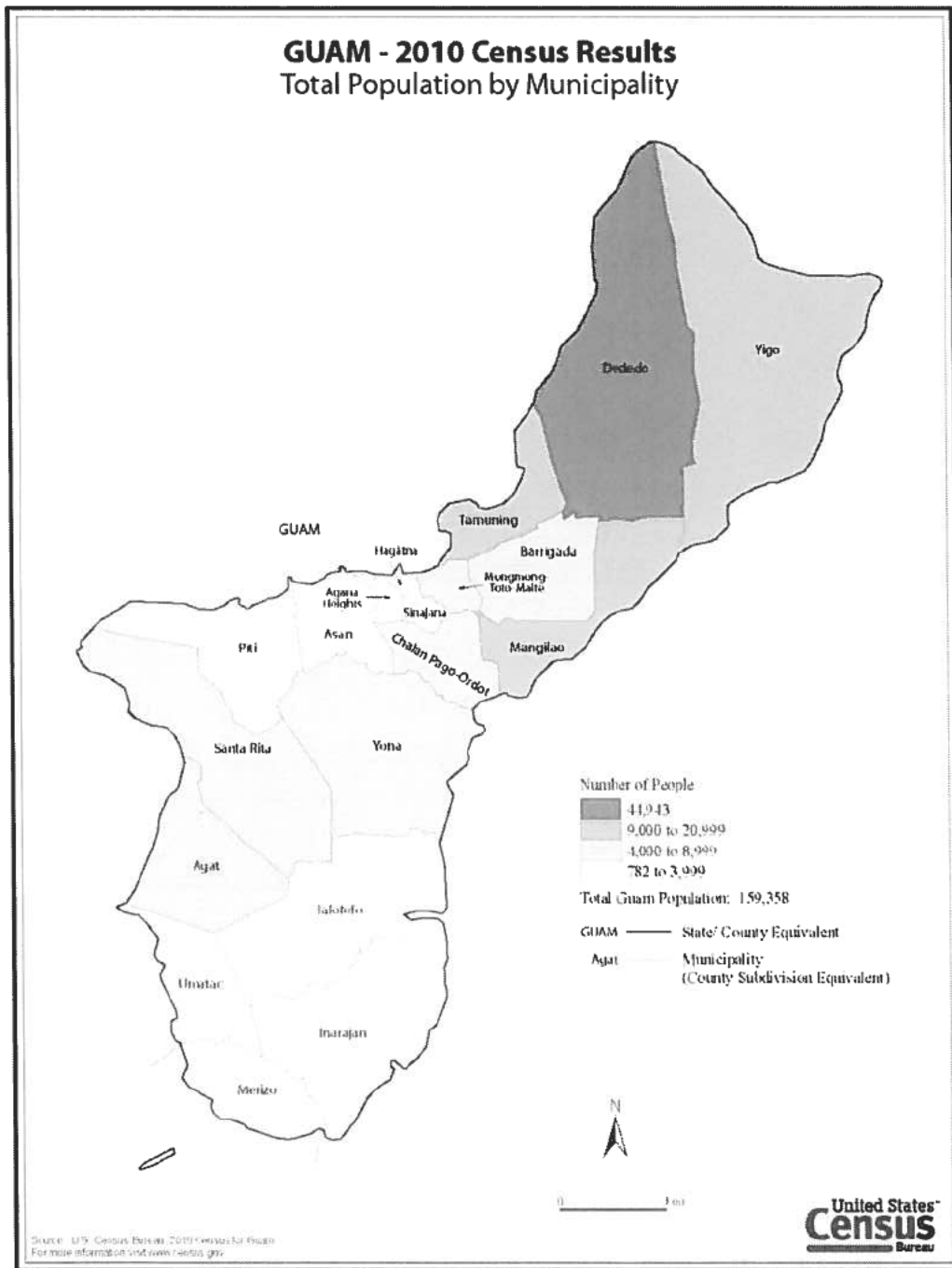




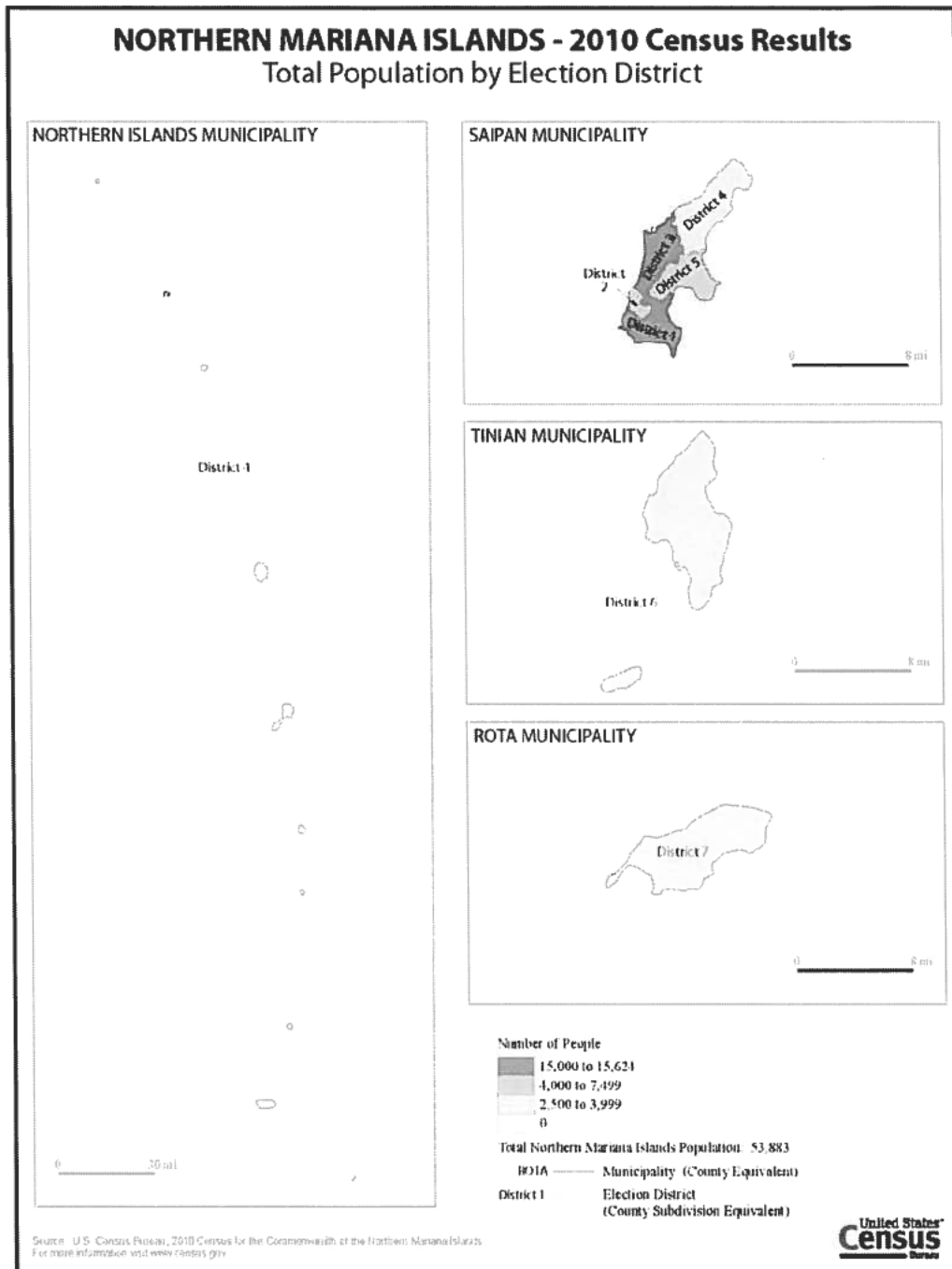




**SUBSCRIBER POPULATION DENSITIES**



**Figure 7 – Guam Population Density**



**Figure 8. CNMI Population Densities**

| <b>Population of the Commonwealth of the Northern Mariana Islands:<br/>2010</b> |                   |
|---|-------------------|
| <b>Geographic area</b>  | <b>Population</b> |
| <b>Commonwealth of the Northern Mariana Islands.....</b>                        | <b>53 883</b>     |
| <b>Northern Islands Municipality.....</b>                                       | <b>0</b>          |
| District 4.....   | 0                 |
| <b>Rota Municipality.....</b>   | <b>2 527</b>      |
| District 7.....   | 2 527             |
| <b>Saipan Municipality.....</b>   | <b>48 220</b>     |
| District 1.....   | 15 160            |
| District 2.....   | 6 382             |
| District 3.....   | 15 624            |
| District 4.....   | 3 847             |
| District 5.....   | 7 207             |
| <b>Tinian Municipality.....</b>   | <b>3 136</b>      |
| District 6.....   | 3 136             |

**Table 1. Populations by District in the CNMI (2010)**

| <b>Population of Guam: 2010</b>       |                   |
|---------------------------------------|-------------------|
| <b>Geographic area</b>                | <b>Population</b> |
| <b>Guam.....</b>                      | <b>159 358</b>    |
| Agana Heights municipality.....       | 3 808             |
| Agat municipality.....                | 4 917             |
| Asan municipality.....                | 2 137             |
| Barrigada municipality.....           | 8 875             |
| Chalan Pago-Ordot municipality.....   | 6 822             |
| Dededo municipality.....              | 44 943            |
| Hagåtña municipality.....             | 1 051             |
| Inarajan municipality.....            | 2 273             |
| Mangilao municipality.....            | 15 191            |
| Merizo municipality.....              | 1 850             |
| Mongmong-Toto-Maite municipality..... | 6 825             |
| Piti municipality.....                | 1 454             |
| Santa Rita municipality.....          | 6 084             |
| Sinajana municipality.....            | 2 592             |
| Talofofo municipality.....            | 3 050             |
| Tamuning municipality.....            | 19 685            |
| Umatac municipality.....              | 782               |
| Yigo municipality.....                | 20 539            |
| Yona municipality.....                | 6 480             |

**Table 2. Populations by Municipality in Guam (2010)**

## **V. VULNERABILITIES**



## **VI. MITIGATION OF VULNERABILITIES**



## **VII. RESTORATION CRITERIA**



## **VIII. RESTORATION PRIORITIES FOR BACK HAUL LINKS**

## **IX RESTORATION PRIORITIES FOR BTS SITES**

**X. RESTORATION PRIORITIES FOR Wi-Max SITES**

**XI. RESTORATION PRIORITIES FOR LTE SITES**

## **APPENDIX A: SITE INSPECTION REPORT**

**APPENDIX B**

**TYPHOON EMERGENCY PREPAREDNESS PLAN**





## EMERGENCY PREPAREDNESS

























**APPENDIX C**

**RESTORATION PRIORITIES FOR GUAM 3G BACK HAUL  
NETWORK**























## **APPENDIX D**

### **RESTORATION PRIORITIES FOR GUAM CELLULAR SITES**

















**APPENDIX E**  
**RESTORATION PRIORITIES FOR GUAM CDMA SITES**



























**APPENDIX F**

**RESTORATION PRIORITIES FOR GUAM GSM SITES**























## **APPENDIX G**

### **RESTORATION PRIORITIES FOR CNMI CELLULAR SITES**





**APPENDIX H**  
**RESTORATION PRIORITIES FOR CNMI CDMA SITES**







## **APPENDIX I**

### **RESTORATION PRIORITIES FOR CNMI GSM SITES**





## **APPENDIX J**

### **AN ASSESSMENT OF THE RISK OF DAMAGE TO THE IT&E SWITCHES LOCATED IN SUSUPE, SAIPAN FROM A TSUNAMI**





## APPENDIX K

### TSUNAMIS

#### INTRODUCTION

Located as they are in the Western Pacific Ocean, Guam and the Commonwealth of the Northern Mariana Islands (CNMI) are in the direct path of tsunamis generated by earthquakes along the Pacific Rim. This includes the West Coast of South America, most notably Chile, the Cascadian, Aleutian, and Kuril Island subduction zones, and offshore the East Coast of Japan. In addition, mid-ocean tsunami-generating earthquakes occurring in the Eastern Philippines, Manus, Mariana, and Ryukyu-Nankai trenches can also affect Guam and the CNMI.

The December, 2004 Sumatra tsunami focused the attention of the U.S. Congress on reducing the tsunami vulnerability of U.S. coastal communities. On December 20, 2006, the U.S. Congress passed the "Tsunami Warning and Education Act." The Act mandated development of a tsunami forecasting capability based on models and measurements, including tsunami inundation models and maps. This work was undertaken by the Pacific Marine Environment Laboratory (PMEL), which undertook the task of extending a numerical simulation model named the Method of Splitting Tsunami (MOST) Model originally developed in 1997 to predict the effects of tsunamis generated by Aleutian Island earthquakes on Hawaii to other areas of tsunami generation and impact.<sup>3</sup> One result of this effort is a study published in December 2010 describing simulation results for tsunami impact from large-scale tsunamis on Apra Harbor.<sup>2</sup> A second result of this effort resulted in a study of the vulnerability of five of Guam's coastal communities: Tumon Bay, Apra Harbor; Pago Bay; Agana Bay; and Inarajan Bay under 725 different earthquake scenarios.<sup>4</sup> Comparison of simulated tsunamis generated by the MOST model with three actual mega-earthquake tsunami events, Kamchatka 1952 (9.0  $M_w$ ), Chile, 1960 (9.2  $M_w$ ), and Alaska 1964 (9.2  $M_w$ ) recorded at the five locations show good agreement between the simulation model and actual readings, yielding a high degree of confidence in the simulation results.

The MOST model accurately simulates all three stages of a tsunami, generation of the tsunami; the earthquake that generates the tsunami, propagation of the tsunami across the ocean, and runup at the point of impact. A description of how it accomplishes this is given in general terms in Titov and Gonzalez<sup>1</sup> and specifically for the scenarios considered for the Apra Harbor simulations in Uslu, et al.<sup>2,3</sup>

The impact of large magnitude historical tsunamis to Guam is inherently different from impacts along coastlines of Japan, Hawaii, Alaska, and the U.S. West Coast due to

<sup>3</sup> V.V. Titov and F. I. Gonzalez, *Implementation and Testing of the Method of Splitting Tsunami (MOST) Model*, NOAA Technical Memorandum ERL PMEL-112, November, 1997.

<sup>2</sup> Uslu, Burak; Marie Eble; and Vasily Titov, *A Tsunami Forecast Model for Apra Harbor, Guam*, PMEL Forecast Series: Vol. 9, December 2010.

directivity of wave propagation and local conditions.<sup>2</sup> This is due to the presence of fringing reefs and rapid drop off to deep water surrounding the island. Thus, simply looking at the effects of tsunamis elsewhere and extending the observations to making predictions about effects on Guam is likely to either overestimate or underestimate the effects. Thus, the studies referenced should be used to make predictions of the effects of tsunamis generated by these earthquake based on the factors such as location of the earthquake and its magnitude rather than near-field effects of tsunamis in areas close to the epicenter of the earthquake.

PMEL is currently preparing a tsunami hazard assessment for the CNMI, but it has not yet been published.

## EFFECTS

### Guam:

Four tsunamis since 1849 have caused damage on Guam. These tsunamis occurred in 1849, 1892, 1990, and 1993. Based on historical data, Pacific Rim earthquakes below 8.0 on the Moment Magnitude Scale ( $M_w$ ) have not generated tsunamis that noticeably affected Guam. The maximum wave amplitude observed along the south and east coasts of Guam as a result of the 1993 Marianas Trench earthquake (magnitude ?) tsunami was 2 meters, but the extent of inundation is unknown because the earthquake and tsunami were followed almost immediately by Typhoon Steve before an assessment of the damage due to the earthquake and tsunami could be undertaken.<sup>5</sup> The 1849 tsunami was reported to have caused a 6.9 meter wave in Agat and a runup inland of 1,321 feet in Umatac Bay.<sup>6</sup>

The worst-case for locations for earthquakes generating tsunamis for Guam are the Eastern Philippines, the Kuril Islands/Japan, and the Marianas subduction zones. A magnitude 8.5  $M_w$  earthquake in the Kuril Islands/Japan or Mariana subduction zones could generate a wave height in Pago Bay of up to 4.42 meters. A magnitude 9.0  $M_w$  earthquake in the same locations could generate a wave height in the same location of up to 14.5 meters.

Estimated wave heights for different earthquake scenarios extracted from Uslu, et al<sup>3</sup>, are shown in tables 1 and 2 for earthquake magnitudes 8.5  $M_w$  and 9.0  $M_w$ , respectively. These figures are used for the maximum wave heights to be expected in the vulnerability assessments that follow below:

**Table 1 – Maximum Predicted Wave Heights on Guam for Tsunamis Generated by Magnitude 8.5  $M_w$  Earthquakes**

|  | Maximum Wave Height |
|--|---------------------|
|--|---------------------|

<sup>5</sup> Uslu, Burak, Vasily Tivov, Marie Eble & Christopher Chamberlin, *Tsunami Hazard Assessment for Guam*, NOAA OAR Special Report, Tsunami Hazard Assessment Special Series, Vol. 1, May 2010.

<sup>6</sup> *Pacific Daily News*, Vol 43, No. 48, March 21, 2011.

|                                 | (m)              |                    |                 |                  |                     |
|---------------------------------|------------------|--------------------|-----------------|------------------|---------------------|
| <b>Earthquake Location</b>      | <b>Tumon Bay</b> | <b>Apra Harbor</b> | <b>Pago Bay</b> | <b>Agana Bay</b> | <b>Inarajan Bay</b> |
| Alaska/Aleutians-Cascadia       | 0.3              | 0.31               | 0.59            | 0.26             | 0.41                |
| Eastern Philippines             | 1.4              | <b>0.87</b>        | 1.24            | <b>0.91</b>      | 1.14                |
| Kuril Islands/Japan and Mariana | 0.27             | 0.77               | <b>4.42</b>     | 0.66             | <b>2.8</b>          |
| Manus                           | <b>1.49</b>      | 0.25               | 0.84            | 0.25             | 0.47                |
| New Guinea                      | 1.02             | 0.24               | 0.33            | 0.25             | 0.32                |
| Ryukyu-Nankai                   | 0.78             | 0.65               | 0.5             | 0.54             | 0.36                |

**Table 2 – Maximum Predicted Wave Heights on Guam for Tsunamis Generated by Magnitude 9.0  $M_w$  Earthquakes**

|                                 | Maximum Wave Height<br>(m) |                    |                 |                  |                     |
|---------------------------------|----------------------------|--------------------|-----------------|------------------|---------------------|
| <b>Earthquake Location</b>      | <b>Tumon Bay</b>           | <b>Apra Harbor</b> | <b>Pago Bay</b> | <b>Agana Bay</b> | <b>Inarajan Bay</b> |
| Alaska/Aleutians-Cascadia       | 1.6                        | 1.4                | 2.7             | 1.1              | 1.9                 |
| Eastern Philippines             | <b>7.0</b>                 | <b>3.7</b>         | 5.4             | <b>5.6</b>       | 3.8                 |
| Kuril Islands/Japan and Mariana | 4.6                        | 2.2                | <b>14.5</b>     | 2.9              | <b>9.4</b>          |
| Manus                           | 1.1                        | 0.9                | 2.6             | 0.8              | 1.6                 |
| New Guinea                      | 1.3                        | 1.0                | 1.4             | 0.9              | 1.1                 |
| Ryukyu-Nankai                   | 3.4                        | 2.2                | 2.6             | 2.7              | 1.4                 |

**Table 3 – Maximum Predicted Wave Heights on Guam from Tsunamis**

|                 | <b>Magnitude</b>       |           |
|-----------------|------------------------|-----------|
|                 | 8.5 $M_w$              | 9.0 $M_w$ |
| <b>Location</b> | <b>Wave Height (m)</b> |           |
| Tumon Bay       | 1.49                   | 7         |
| Apra Harbor     | 0.87                   | 3.7       |
| Pago Bay        | 4.42                   | 14.5      |
| Agana Bay       | 0.91                   | 5.6       |
| Inarajan Bay    | 2.8                    | 9.4       |



















Table 5 – Major Pacific Ocean Earthquakes since 1868

| <b>Year</b> | <b>Location</b>        | <b>Magnitude</b> |
|-------------|------------------------|------------------|
| 1868        | Arica, Chile           | 9.0              |
| 1877        | Tarapaca, Chile        | 8.3              |
| 1902        | Agana Guam             | 8.1              |
| 1906        | Honshu                 | 8.4              |
| 1909        | Honshu                 | 8.3              |
| 1909        | Guam                   | 8.0              |
| 1910        | Taiwan                 | 8.3              |
| 1911        | Ryukyu Islands         | 8.7              |
| 1916        | Duda, Japan            | 8.0              |
| 1918        | Mindinao Islands       | 8.3              |
| 1920        | Taiwan                 | 8.3              |
| 1923        | Kamchatka              | 8.3              |
| 1924        | Mindinao Islands       | 8.3              |
| 1944        | Kii, Japan             | 8.1              |
| 1946        | Honshu                 | 8.1              |
| 1946        | Unimak Island          | 7.3              |
| 1948        | Panay, PI              | 8.3              |
| 1952        | Kamchatka              | 9.0              |
| 1952        | Hokkaido               | 8.1              |
| 1957        | Aleutian Islands       | 9.1              |
| 1960        | Temuca, Chile          | 9.5              |
| 1964        | Prince William Sound   | 9.2              |
| 1968        | Honshu                 | 8.2              |
| 1975        | Hawaii                 | 7.2              |
| 1976        | Mindinao Islands       | 8.1              |
| 1985        | Valparaiso, Chile      | 7.8              |
| 1996        | Andreanov, AK          | 7.9              |
| 1998        | Papua New Guinea       | 7.0              |
| 2003        | Hokkaido               | 8.3              |
| 2003        | Offshore Central Chile | 6.8              |
| 2006        | Kuril Islands          | 8.1              |
| 2007        | Kuril Islands          | 8.2              |
| 2007        | Antofagasta, Chile     | 7.7              |
| 2007        | Antofagasta, Chile     | 6.7              |
| 2009        | Vanuatu                | 7.6              |
| 2009        | Samoa                  | 8.0              |
| 2009        | Tarapaca, Chile        | 6.5              |
| 2010        | Bonin Islands          | 7.4              |
| 2010        | Solomon Islands        | 7.2              |
| 2010        | Bio-Bio, Chile         | 8.8              |
| 2011        | Honshu                 | 9.0              |

## INDEX

(TBD)

### **Preamble for 5 Year Plan Section of Annual Report**

This 5-year improvement plan is a section of the IT&E 2012 Annual Report. It is in compliance with § 54.313(a)(1) adopted in the FCC's USF/ICC Transformation Order (11-161). This document also incorporates further clarifications identified in subsequent Reconsideration Orders, as applicable, in effect prior to the filing of the Annual Report.

IT&E has carefully developed its improvement plan, concentrating upon the delivery and continuation of a robust network which provides, at a minimum, the federally required voice and broadband connectivity as stipulated by regulatory rule.

IT&E advises that this improvement plan has been carefully crafted, matching measured network deployment, improvement and quality service levels with known financial implications of the Transformation Order upon the company's support cash flows. The uncertainty of such cash flows being received in the outer-years as a result of current and potential regulatory action on rural rate-of-return carriers has resulted in the Company taking a balanced yet realistic approach.

The environment in which IT&E operates remains dynamic, not static. As a result, IT&E reserves the opportunity to modify its plan in response to further regulatory decisions as they are adopted, and their implication upon IT&E's financial viability in providing the required services and service level quality becomes known.

IT&E will re-evaluate this plan on an annual basis. Action, however, may also be taken abruptly on the presented plan for both current and outer years in the event of evolving regulatory conditions and/or changes in technology (vendor)-driven support. All adjustments to the improvement plan in this document will be reflected and explained in subsequent annual reports.

## **IT&E (Guam)**

### **FIVE YEAR SERVICE QUALITY IMPROVEMENT PLAN**

#### **OVERVIEW**

PTI Pacifica, Inc., dba IT&E (IT&E), as an Eligible Telecommunications Carrier (ETC) currently provides Universal Service supported services to 15 exchanges, for which there is 1 wire center.

Consistent with Commission requirements, this Service Quality Improvement Plan addresses IT&E's eligible telecommunications carrier operations.<sup>1</sup> A detailed report on the Company's progress on its previous plan and description of the Company's plans for the provision of the supported services in the five-year period starting with January 2013 is provided herein. IT&E will re-evaluate this plan on an annual basis. The environment in which IT&E operates remains dynamic. As a result, IT&E reserves the opportunity to modify its plan in response to further regulatory decisions as they are adopted, and as IT&E's financial viability in providing the required services and service level quality becomes known.

Per USAC, during the calendar year 2012, IT&E has received a total of \$2,719,618 (as of 1/31/2013) in USF support funds. The breakdown of the funding for the year was:

- \$(52,755) High Cost Loop Support,
- \$(11,306) Local Switching Support
- \$0 Connect America Fund-Intercarrier Compensation Support
- \$62,421 Interstate Common Line Support
- \$2,721,258 Frozen High Cost Support

All funds were used in 2012 to maintain, upgrade and improve the Company's network and to cover its operating expenses and debt commitments as necessary to permit it to offer a high level of service for both voice and broadband throughout its service area. IT&E spent a total of \_\_\_\_\_ to maintain and improve the quality of wireless voice and data service in Guam during calendar year 2012.

#### **IMPROVEMENT PLANS BY YEAR (2013-2017 inclusive)**

Summary descriptions in accordance Part 54.202(a)(1)(ii) and Part 54.313(a)(1) by year and by wire center are presented in the paragraphs below and present network improvements planned for the next five years. Detailed expenditures on a wire center basis are contained in the attached Excel worksheets. Area and population estimates impacted by the improvements are identified in the worksheets as well as on the wire center maps. Costs are broken out by voice and broadband service.

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<sup>1</sup>Per 47 C.F.R. § 54.314, federal USF support, "will be used only for the provision, maintenance, and upgrading of facilities and services for which the support is intended." If investments or expenses are for service areas larger than the supported service areas, then allocations of the expenditures are required.



- Network improvement expenditures identify the cost to provide those services supported by the universal service funding mechanisms.
- Costs for individual projects involving multiple wire centers are broken out by wire center on a ratio of “population served” basis if a specific dollar amount is unavailable.
- Costs are reported only for those service areas in which the Company is authorized to receive USF funding. Costs incurred outside the authorized area, if any, are excluded.

## **BASELINE MAPS**

IT&E presents the attached Baseline Maps (GIS or similar) highlighting current availability of broadband service, by wire center, which delivers at least 4Mbps actual downstream and 1Mbps actual upstream within its territory which is sufficient to provide VoIP. This is the baseline territory for which the network performance testing will be done when the rules and format are finalized by the FCC.

IT&E is a competitive ETC providing telecommunications to the Territory of Guam. Established in 1981, it serves a current population of 159,358 over a geographic area of 181.3 sq miles. The service territory is generally hilly with a few streams and a large number of road crossings. The population is spread about in villages located throughout the island. The community is incorporated as a territory. There are many small family businesses; health, medical, and police facilities are located throughout the community. There is a government fire department and both a public school system and numerous private schools. There are many other anchor institutions located within the serving area. A complete listing can be found on the NTIA ARRA BTOP website.

The demographics of the community reflect its multicultural local and immigrant ethnic roots. The indigenous ethnic population is Chamorro with a sizeable community of Carolinians. There are small, but reasonably sized, ethnic Korean and Chinese communities along with a sizeable Filipino population, all of which use their native languages. IT&E’s staff provides customer service in Tagalog, Chinese and Korean languages as needed. Religious affiliations include Roman Catholics, various protestant Christian sects, Muslims, and Buddhists.

There are 50,567 households and a total population of 159,358 within the service territory. The median household income level is approximately \$39,000. IT&E serves no Lifeline subscribers in Guam.

















































































